LONDON-WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA1 | Euston - Station and Approach

Data appendix (LQ-001-001)

Land quality

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Department for Transport

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1 Introduction

1.1.1 The land quality appendix for the Euston – Station and Approach community forum area (CFA1) comprises:

- a summary of engagement undertaken (Section 2);
- detailed risk assessment (Section 3);
- inspection notes and other site data (Section 4);
- geological sites of special scientific interest (SSSI) or regionally important geological sites (RIGS) (Section 5); and
- mining and minerals data (Section 6).

1.1.2 Maps referred to throughout the land quality appendix are contained in Map LQ-01-001 in Volume 5, Land Quality Map Book.

2 Engagement

2.1.1 Table 1 sets out the local authorities and other organisations that have been engaged with during the preparation of the land quality section of the environmental impact assessment (EIA) for this study area, the types of information that have been provided to the assessment team and any specific concerns of those with whom the team engaged.

Table 1: Engagement on land quality issues undertaken for the Euston – Station and Approach study area

Local authority or other organisation	Method/dates of contact	Information provided and/or specific concerns
London Borough of Camden (LBC)	Contacted via email on: 31 October 2012; 08 November 2012; 09 November 2012; and 21 November 2012.	LBC provided a response to the initial contact email sent to the single point of contact which confirmed that the council were considering the request for baseline information and that the search area was a large swathe of the borough when the council usually search on the basis of individual properties. A response was provided detailing the information already held by the project team (including a search of the LBC online planning portal) and asked whether there would be benefit in attending the council offices to try and further refine the search and/or look at any ground investigation reports that are held at the council offices. LBC advised that it was unlikely that there would be any investigation reports held by the council which are not on the planning portal. It is possible, however, that some reports may have been scanned in and held elsewhere and which may not have been placed on to the planning portal. The council advised that if a specific site report was requested and they were not able to locate it on the planning portal, the council could search for it if they are provided with the site address. LBC advised that In view of the large number of premises shown on the assessment search map they would need to consider the resource implications for such requests before confirming agreement to it. It was decided to approach the council on a site by site basis if needed. No further data was requested.
London Fire Brigade (LFB)	Contacted via email on: 02 August 2013.	Contact was made by email initially, followed by a telephone conversation with LFB regarding a single site that had been identified as potentially having petroleum storage facilities within their boundaries. A petroleum storage facility enquiry was directed to the LFB for the former BP Garage, 142 Hampstead Road, London, NW1 2PT. Records indicate the site had seven former petroleum tanks on site ranging from 15356 - 29100 litre capacity. All tanks have since been foam filled and decommissioned.

3 Detailed risk assessment

3.1.1 This section presents assessments for the higher risk potentially contaminated sites within the study area. For each site the following data is presented:

- baseline risk assessment;
- construction risk assessment;
- post-construction risk assessment; and
- assessment of temporary (construction) and permanent (post-construction) effects.

3.1.2 This risk assessment incorporates the following assumptions:

- construction workers are not included as part of this assessment;
- sites that have been assessed as potentially posing a contaminative risk to the Proposed Scheme have been grouped and considered together where appropriate. It should be noted that some parcels of land may have had several land uses from different epochs;
- during construction standard mitigation procedures will be in place in accordance with the draft Code of Construction Practice (CoCP) (Volume 5: Appendix CT-003-000); and
- during the post-construction condition it is assumed that all required remediation has been undertaken and carried out.

3.1.3 The sites assessed in this study area are shown on Map LQ-01-001 (Volume 5, Land Quality Map Book).

Table 2: Detailed risk assessment for areas potentially posing a contaminative risk within the Euston - Station and Approach study area

Area reference	Name	Table numbers
1-40	Printing office	3,17,31,45
1-08	Printing works	3,17,31,45
1-07	Builders yard	4,18,32,46
1-35	Builders yard	4,18,32,46
1-33	Wagon works	5,19,33,47
1-14	Railway land	5,19,33,47
1-44	Electricity sub-station	6,20,34,48
1-04	Disused fuel filing station	7,21,35,49
1-30	Garage	7,21,35,49
1-05	Garage	8,22,36,50
1-11	Timber yard	9,23,37,51

Area reference	Name	Table numbers
1-27	Warehouses	10,24,38,52
1-24	Printing works	11,25,39,53
1-29	Chemical works	12,26,40,54
1-25	Warehouses	13,27,41,55
1-26	Saw mill	13,27,41,55
1-32	Chemical works	14,28,42,56
1-38	Printing works	14,28,42,56
1-01	Leather works	15,29,43,57
1-20	Foundry	16,30,44,58
1-39	Foundry	16,30,44,58

3.1.4 Contaminant types included within the risk assessments are based on the Priority Contaminants Report CLR 8[1]. Although withdrawn, this document is still commonly used and is considered good practice.

3.1.5 The remainder of this appendix presents the risk assessment for the sites set out in Table 2. The following abbreviations are used in these tables:

- CSM - conceptual site model;
- MTBE - methyl tert butyl ether;
- PAH - polycyclic aromatic hydrocarbons;
- PCB - polychlorinated biphenyls;
- SVOC - semi-volatile organic compounds; and
- VOC - volatile organic compounds.

[1] Defra and Environment Agency, (2002), *Potential contaminants for the assessment of land- R&D Publication*, Bristol, Environment Agency.

3.1 Baseline risk assessment

Table 3: Summary CSM for on-site former printing works and chemical works at baseline (Area ref: 1-40/1-08)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from previous activities, including: hydrocarbons, heavy metals, phenols, acetones, aromatic hydrocarbons, VOC, PCB and asbestos	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Low likelihood	Minor	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations, and water supply pipes)	Low likelihood	Minor	Low

Table 4: Summary CSM for on-site former building yards at baseline (Area ref: 1-07/1-35)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils, heavy metals, PAH and asbestos	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Minor	Low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations, and water supply pipes)	Low likelihood	Minor	Low

Table 5: Summary CSM for on-site rail land and former wagon works at baseline (Area ref: 1-14/1-33)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Contamination in made ground (e.g. ballast) as well as: PCB, metals, asbestos, PAH and chlorinated hydrocarbons); potentially low levels of ground gas (methane and carbon dioxide)	Current site users (rail staff)	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
		Exposure to asphyxiative or explosive gases	Unlikely	Severe	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Low likelihood	Minor	Low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations, and water supply pipes)	Likely	Minor	Moderate/low
		Migration of hazardous gas (potentially asphyxiative or explosive gases) to confined spaces via permeable strata or conduits	Unlikely	Medium	Low

Table 6: Summary CSM for an on-site former electricity sub-station during at baseline (Area ref: 1-44)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities including: hydrocarbons, heavy metals, asbestos PAH, PCB	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Medium	Low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low	Minor	Low

Table 7: Summary CSM for on-site disused fuel filling station and garage at baseline (Area ref: 1-04/1-30)

Source	**Receptor**	**Pathway**	**Probability**	**Consequence**	**Risk at baseline without mitigation**
Residual contamination from former activities, including: hydrocarbons including waste oils and petrol and diesel, heavy metals, PAH, chlorinated aliphatic compounds, organolead compounds, MTBE	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Low likelihood	Minor	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Likely	Minor	Moderate/low

Table 8: Summary CSM for off-site garage at baseline (Area ref: 1-05)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils and fuels, heavy metals, PAH, chlorinated aliphatic compounds and organolead compounds	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Low likelihood	Minor	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 9: Summary CSM for an onsite former timber yard at baseline (Area ref: 1-11)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals, arsenic, PAH, phenols and cresols	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low	Minor	Low

Table 10: Summary CSM for on-site former warehouse over a Secondary A superficial aquifer at baseline (Area ref: 1-27)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Contamination from on-going activities, potentially including: fuels such as heating oils	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Minor	Low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contaminants	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 11: Summary CSM for an on-site former printing works over a Secondary A superficial aquifer at baseline (Area ref: 1-24)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils, heavy metals , chlorinated solvents, acetones, aromatic hydrocarbons, PCB and asbestos	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Unlikely	Medium	Low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contaminants	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 12: Summary CSM for an off-site former chemical works over a Secondary A superficial aquifer at baseline (Area ref: 1-29)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals , PCB, VOC, SVOC	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 13: Summary CSM for an off-site former warehouse and saw mill over a Secondary A superficial aquifer at baseline (Area ref: 1-25/1-26)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals, arsenic, PAH, phenols and cresols	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 14: Summary CSM for an off-site former chemical works and printing works at baseline (Area ref: 1-32/ 1-38)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals , PCB, VOC, SVOC, acetone, paints and dyes	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 15: Summary CSM for an off-site former leather works at baseline (Area ref: 1-01)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils, heavy metals (including chromium), solvents and pathogens	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 16: Summary CSM for off-site foundries at baseline (Area ref: 1-39 and 1-20)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from previous activities– oil/fuel hydrocarbons, PAH, heavy metals , PCB, sulphates, sulphur and asbestos	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

3.2 Construction risk assessment

Table 17: Summary CSM for on-site former printing works and chemical works during construction phase (Area ref: 1-40/1-08)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Residual contamination from previous activities, including: hydrocarbons, heavy metals, phenols, acetones, aromatic hydrocarbons, VOC, PCB and asbestos	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Not present during construction		
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Low likelihood	Minor	Low
		Off-site migration of wind-blown dust	Low likelihood	Minor	Low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 18: Summary CSM for on-site former building yards during construction phase (Area ref: 1-07/1-35)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils, heavy metals, PAH and asbestos	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Not present during construction		
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours, volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 19: Summary CSM for on-site rail land and former wagon works during construction phase (Area ref: 1-14/1-33)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Contamination in made ground (e.g. ballast) as well as: PCB, metals, asbestos, PAH and chlorinated hydrocarbons); potentially low levels of ground gas (VOC and methane and carbon dioxide)	Current site users (rail staff)	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Not present during construction		
		Exposure to asphyxiative or explosive gases	Not present during construction		
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas	Off-site migration of soil vapours, volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Low likelihood	Minor	Low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Low likelihood	Minor	Low
	Buildings/under-ground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Likely	Minor	Moderate/low
		Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Unlikely	Medium	Low

Table 20: Summary CSM for an on-site former electricity sub-station during construction phase (Area ref: 1-44)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities including: hydrocarbons, heavy metals, asbestos PAH, PCB	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Not present during construction		
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 21: Summary CSM for on-site disused fuel filing station and garage during construction phase (Area ref: 1-04/1-30)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Residual contamination from former activities, including: hydrocarbons including waste	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Not present during construction		

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
oils and petrol and diesel, heavy metals, PAH, chlorinated aliphatic compounds, organolead compounds, MTBE	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Low likelihood	Minor	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Likely	Minor	Moderate/low

Table 22: Summary CSM for off-site garage during construction phase (Area ref: 1-05)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons including waste	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
oils and fuels, heavy metals, PAH, chlorinated aliphatic compounds and organolead compounds	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Low likelihood	Minor	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 23: Summary CSM for an on-site former timber yard during construction phase (Area ref: 1-11)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals, arsenic, PAH, phenols and cresols	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low	Minor	Low

Table 24: Summary CSM for an on-site warehouse over a Secondary A superficial aquifer during construction phase (Area ref: 1-27)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Contamination from on-going activities, potentially including: fuels such as heating oils	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Not present during construction		
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 25: Summary CSM for an on-site printing works over a Secondary A superficial aquifer during construction phase (Area ref: 1-24)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils, heavy metals , chlorinated solvents, acetones, aromatic hydrocarbons, PCB and asbestos	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Not present during construction		
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 26: Summary CSM for an off-site former chemical works over a Secondary A superficial aquifer during construction phase (Area ref: 1-29)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals , PCB, VOC, SVOC	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 27: Summary CSM for an off-site warehouse and saw mill works over a Secondary A superficial aquifer during construction phase (Area ref: 1-25/1-26)

Source	**Receptor**	**Pathway**	**Probability**	**Consequence**	**Risk with construction stage mitigation**
Residual contamination from former activities, including: hydrocarbons heavy metals, arsenic, PAH, phenols and cresols	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours, volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 28: Summary CSM for an off-site chemical works and printing works during construction phase (Area ref: 1-32/ 1-38)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals, PCB, VOC, SVOC, acetone, paints and dyes	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 29: Summary CSM for an off-site former leather works at construction (Area ref: 1-01)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils, heavy metals (including chromium), solvents and pathogens	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 30: Summary CSM for off-site former foundries during construction phase (Area ref: 1-39 and 1-20)

Source	Receptor	Pathway	Probability	Consequence	Risk with construction stage mitigation
Residual contamination from previous activities– oil/fuel hydrocarbons, PAH, heavy metals, PCB, sulphates, sulphur and asbestos	Current site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Off-site migration of wind-blown dust	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
	Off-site migration of wind-blown dust	Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

3.3 Post-construction risk assessment

Table 31: Summary CSM for on-site former printing works and chemical works at post construction stage (Area ref: 1-40/1-08)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination within made ground – hydrocarbons including waste oils, heavy metals, acetones, aromatic hydrocarbons, PCB and asbestos	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Unlikely	Minor	Very low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Unlikely	Minor	Very low

Table 32: Summary CSM for on-site former building yards at post construction stage (Area ref: 1-07/1-35)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils, heavy metals, PAH and asbestos	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Unlikely	Minor	Very low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Unlikely	Minor	Very low

Table 33: Summary CSM for on-site rail land and wagon works at post construction stage (Area ref: 1-14/1-33)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Contamination in made ground (e.g. ballast) as well as: PCB, metals, asbestos, PAH and chlorinated hydrocarbons); potentially low levels of ground gas (VOC, methane and carbon dioxide)	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low	Minor	Low
		Exposure to asphyxiative or explosive gases	Unlikely	Severe	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low	Minor	Low
		Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Unlikely	Medium	Low

Table 34: Summary CSM for an on-site former electricity sub-station during post-construction phase (Area ref: 1-44)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities including: hydrocarbons, heavy metals, asbestos PAH, PCB	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Unlikely	Minor	Very low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Unlikely	Minor	Very low

Table 35: Summary CSM for on-site disused fuel filling station and garage at post construction stage (Area ref: 1-04/1-30)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils and petrol and diesel, heavy metals, PAH, chlorinated aliphatic compounds, organolead compounds, MTBE	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Unlikely	Minor	Very low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours, volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contamination	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Unlikely	Minor	Very low

Table 36: Summary CSM for off-site garage during post-construction phase (Area ref: 1-05)

Source	Receptor	Pathway	Probability	Consequence	Risk at baseline without mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils and fuels, heavy metals, PAH, chlorinated aliphatic compounds and organolead compounds	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Low likelihood	Minor	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 37: Summary CSM for a former off-site timber yard at post construction stage (Area ref: 1-11)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals, arsenic, PAH, phenols and cresols	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low	Minor	Low

Table 38: Summary CSM for an on-site former warehouse over a Secondary A superficial aquifer at post construction stage (Area ref: 1-27)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Contamination from on-going activities, potentially including: fuels such as heating oils	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Unlikely	Minor	Very low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contaminants	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Unlikely	Minor	Very low

Table 39: Summary CSM for an on-site printing works over a Secondary A superficial aquifer at post construction stage (Area ref: 1-24)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils, heavy metals , chlorinated solvents, acetones, aromatic hydrocarbons, PCB and asbestos	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Unlikely	Minor	Very low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Unlikely	Minor	Very low
	Secondary A bedrock aquifer (Lambeth Group)	Lateral and vertical migration of mobile contaminants	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Unlikely	Minor	Very low

Table 40: Summary CSM for an off-site chemical works over a Secondary A superficial aquifer at post construction stage (Area ref: 1-29)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals,	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
PCB, VOC, SVOC	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours, volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 41: Summary CSM for an off-site former warehouse and saw mill works over a Secondary A superficial aquifer at post construction stage (Area ref: 1-25/1-26)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals, arsenic, PAH, phenols and cresols	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Lynch Hill Gravel	Lateral and vertical migration of mobile contaminants	Low likelihood	Minor	Low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 42: Summary CSM for an off-site former chemical works and printing works at post construction phase (Area ref: 1-32/ 1-38)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination from former activities, including: hydrocarbons heavy metals, PCB, VOC, SVOC, acetone, paints and dyes	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 43: Summary CSM for an off-site former leather works at post construction phase (Area ref: 1-01)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination from former activities, including: hydrocarbons including waste oils, heavy metals (including chromium), solvents and pathogens	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Medium	Low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

Table 44: Summary CSM for off-site former foundries at post construction phase (Area ref: 1-39 and 1-20)

Source	Receptor	Pathway	Probability	Consequence	Risk with permanent works mitigation
Residual contamination from previous activities– oil/fuel hydrocarbons, PAH, heavy metals, PCB, sulphates, sulphur and asbestos	Future site users	Human uptake through: dermal contact, ingestion or inhalation of soil/dust, volatilised compounds	Low likelihood	Medium	Moderate/low
	Adjacent site users, such as those within residential properties and workers in the surrounding light industrial/residential areas and rail areas	Off-site migration of soil vapours and volatile organic compounds (by diffusion or due to wind)	Unlikely	Minor	Very low
		Off-site migration of wind-blown dust	Unlikely	Minor	Very low
	Buildings/underground structures and services	Direct contact of fabric of buildings and services (e.g. foundations and water supply pipes)	Low likelihood	Minor	Low

3.4 Assessment of temporary (construction) and permanent (post-construction) effects

Table 45: Significance of impact during construction/post construction for an on-site former printing and chemical works (Area ref: 1-40/1-08)

Contaminant linkage	Baseline	Construction	Post-construction	Construction effect	Post-construction effect
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	N/A	Very low	N/A	Moderate beneficial
Exposure of adjacent human receptors (residents) to contamination by inhalation of migrating ground-gas and volatile vapours from contaminated soil/water	Low	Low	Very low	Negligible	Minor beneficial
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Lateral and vertical migration of mobile contamination into the underlying Secondary A bedrock aquifer (Lambeth Group)	Very low	Very low	Very low	Negligible	Minor beneficial
Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Low	Low	Very low	Negligible	Minor beneficial effect
Overall significance				Negligible effect	Negligible to moderate beneficial effect

Table 46: Significance of impact during construction/post construction for on-site former building yards (Area ref: 1-07/1-35)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Low	N/A	Very low	N/A	Minor beneficial
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Very low	Very low	Very low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Lateral and vertical migration of mobile contamination into the underlying Secondary A bedrock aquifers (Lambeth Group)	Very low	Very low	Very low	Negligible	Minor beneficial
Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Low	Low	Very low	Negligible	Minor beneficial
Overall significance				Negligible effect	Negligible to minor beneficial effect

Table 47: Significance of impact during construction/post construction for on-site rail land and former wagon works at baseline (Area ref: 1-14/1-33)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	N/A	Low	N/A	Minor beneficial
Exposure to asphyxiative or explosive gases	Moderate/low	N/A	Moderate/low	N/A	Negligible
Exposure of adjacent human receptors (residents) to contamination by inhalation of migrating ground-gas and volatile vapours from contaminated soil/water	Very low	Very low	Very low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Low	Low	Very low	Negligible	Minor beneficial
Lateral and vertical migration of mobile contamination into the underlying Secondary A bedrock aquifer (Lambeth Group)	Very low	Very low	Very low	Negligible	Minor beneficial
Migration of contamination and direct contact of fabric of buildings and services (e.g. foundations, and water supply pipes)	Moderate/low	Moderate/low	Low	Negligible	Minor beneficial
Migration of contamination and direct contact with buildings receptors including foundations and services	Low	Low	Low	Negligible	Negligible
Overall significance				Negligible effect	Negligible to minor beneficial effect

Table 48: Significance of impact during construction/post construction for an on-site former electricity sub-station at baseline (Area ref: 1-44)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in	Moderate/low	N/A	Very low	N/A	Minor/moderate beneficial

soil, soil-derived dust or contaminated water					
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Very low	Very low	Very low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Lateral and vertical migration of mobile contamination into the underlying Secondary A aquifers (Lambeth Group)	Very low	Very low	Very low	Negligible	Minor beneficial
Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Low	Low	Very low	Negligible	Minor beneficial effect
Overall significance				Negligible effect	Negligible to minor/moderate beneficial effect

Table 49: Significance of impact during construction/post construction for an on-site disused fuel filling station and garage at baseline (Area ref: 1-04/1-30)

Contaminant linkage	Baseline	Construction	Post-construction	Construction effect	Post-construction effect
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	N/A	Very low	N/A	Minor/moderate beneficial
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Low	Low	Very low	Negligible	Minor beneficial
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Lateral and vertical migration of mobile contamination into the underlying Secondary A aquifers (Lambeth Group)	Very low	Very low	Very low	Minor adverse	Minor beneficial
Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Low	Low	Very low	Negligible	Minor beneficial
Overall significance				Negligible effect	Negligible to minor/moderate beneficial effect

Table 50: Significance of impact during construction/post construction for an off-site former garage at baseline (Area ref: 1-05)

Contaminant linkage	Baseline	Construction	Post-construction	Construction effect	Post-construction effect
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	Moderate/low	Negligible	Negligible	Minor/moderate beneficial
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Low	Low	Negligible	Negligible	Minor beneficial
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Negligible	Negligible	Negligible
Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Low	Low	Negligible	Negligible	Negligible
Overall significance				Negligible effect	Negligible effect

Table 51: Significance of impact during construction/post construction for an off-site former timber yard at baseline (Area ref: 1-11)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	Moderate/low	Moderate/low	Negligible	Negligible
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Very low	Very low	Very low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Low	Low	Low	Negligible	Negligible
Overall significance				Negligible effect	Negligible effect

Table 52: Significance of impact during construction/post construction for an on-site former warehouse over a Secondary A superficial aquifer at baseline (Area ref: 1-27)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Low	N/A	Very low	N/A	Minor beneficial
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Very low	Very low	Very low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Leaching of soluble contaminants or migration of liquid contaminants into Lynch Hill Gravel	Low	Low	Very low	Negligible	Minor beneficial
Lateral and vertical migration of mobile contamination into the underlying Secondary A bedrock aquifer (Lambeth Group)	Very low	Very low	Very low	Negligible	Minor beneficial
Migration of contamination and direct contact with buildings receptors including foundations and services	Low	Low	Very low	Negligible	Minor beneficial
Overall significance				Negligible effect	Negligible to minor beneficial effect

Table 53: Significance of impact during construction/post construction for an on-site former printing works over a Secondary A superficial aquifer at baseline (Area ref: 1-24)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Low	N/A	Very low	N/A	Minor beneficial
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Low	Low	Very low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Leaching of soluble contaminants or migration of liquid contaminants into Lynch Hill Gravel	Low	Low	Very low	Negligible	Minor beneficial
Lateral and vertical migration of mobile contamination into the underlying Secondary A bedrock aquifers (Lambeth Group)	Very low	Very low	Very low	Negligible	Minor beneficial
Migration of contamination and direct contact with buildings receptors including foundations and services	Low	Low	Very low	Negligible	Minor beneficial
Overall significance				Negligible effect	Negligible to minor beneficial effect

Table 54: Significance of impact during construction/post construction for an off-site chemical works over a Secondary A superficial aquifer at baseline (Area ref: 1-29)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	Moderate/low	Moderate/low	Negligible	Negligible
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Low	Low	Low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Leaching of soluble contaminants or migration of liquid contaminants into Lynch Hill Gravel	Low	Low	Low	Negligible	Negligible
Migration of contamination and direct contact with buildings receptors including foundations and services	Low	Low	Low	Negligible	Negligible
Overall significance				Negligible effect	Negligible effect

Table 55: Significance of impact during construction/post construction for an off-site warehouse and saw mill over a Secondary A superficial aquifer at baseline (Area ref: 1-25/1-26)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	Moderate/low	Moderate/low	Negligible	Negligible
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Very low	Very low	Very low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Leaching of soluble contaminants or migration of liquid contaminants into Lynch Hill Gravel	Low	Low	Low	Negligible	Negligible
Migration of contamination and direct contact with buildings receptors including foundations and services	Low	Low	Low	Negligible	Negligible
Overall significance				Negligible effect	Negligible effect

Table 56: Significance of impact during construction/post construction for an off-site former chemical works and printing works at baseline (Area ref: 1-32/ 1-38)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	Moderate/low	Moderate/low	Negligible	Negligible
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Low	Low	Low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Low	Low	Low	Negligible	Negligible
Overall significance				Negligible effect	Negligible effect

Table 57: Significance of impact during construction/post construction for an off-site leather works at baseline (Area ref: 1-01)

Contaminant linkage	**Baseline**	**Construction**	**Post-construction**	**Construction effect**	**Post-construction effect**
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	Moderate/low	Moderate/low	Negligible	Negligible
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Low	Low	Low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Low	Low	Low	Negligible	Negligible
Overall significance				Negligible effect	Negligible effect

Table 58: Significance of impact during construction/post construction for off-site former foundries at baseline (Area ref: 1-39 and 1-20)

Contaminant linkage	Baseline	Construction	Post-construction	Construction effect	Post-construction effect
Exposure of on-site human receptors to contamination by direct contact, ingestion and inhalation of contaminants in soil, soil-derived dust or contaminated water	Moderate/low	Moderate/low	Moderate/low	Negligible	Negligible
Exposure of adjacent human receptors (residents) to contamination by inhalation of volatile vapours from contaminated soil/water	Very low	Very low	Very low	Negligible	Negligible
Exposure of adjacent human receptors (in commercial properties) to contamination by direct contact, ingestion and inhalation of contaminants in windblown, soil-derived dust	Very low	Very low	Very low	Negligible	Negligible
Migration of hazardous gas and vapours to confined spaces via permeable strata or conduits	Low	Low	Low	Negligible	Negligible
Overall significance				Negligible effect	Negligible effect

4 Inspections notes and other site data

4.1.1 This section presents the following data:

- names of ground investigation or contamination survey reports reviewed during the study period; and
- any other relevant site data.

4.1.2 There were no site visits carried out due to access constraints.

Table 59: Review of ground investigations for areas located within this community forum area

Local authority area	Description of report (Phase 1, phase 2, validation/ remediation etc.)	Report date	Name of originator	Address of area	Type of scheme, e.g. residential/ commercial development	Planning application reference number
LBC	Site investigation report	January 2006	Stats Ground Engineering	Star Wharf, 38 St Pancras Way	Redevelopment of the site for a new residential building	2007/2969/p
LBC	Report on supplementary contamination investigation and action plan	September 2007	Stats Ground Engineering	22-24 St Pancras Way	Redevelopment of the site for a new residential building	2007/5041/P
LBC	Phase 2 geotechnical and environmental report	December 2004	WSP Environmental Limited	15-23 St Pancras Way	Demolition of existing building and redevelopment for residential buildings	2006/2370/p
LBC	Phase 1 report	December 2010	RPS Limited	Crown & Goose and Snooker Hall 100-102 Arlington Road and 16-18 Delancey Street London NW1 7HP	Demolition of existing public house and the snooker hall and erection of new development including residential units	2011/0069/P
LBC	Site investigation report	October 2009	ADS Consultancy/ ground engineering Ltd	72-76 Eversholt Street London NW1 1BY	Site redevelopment for commercial and residential properties	2010/0140/P
LBC	Phase 1 and 2 environmental and geotechnical investigation	October 2011	Terramech Investigations Ltd	Granby House Granby Terrace London NW1 3SA	Demolition of existing building and erection of a four storey building with offices at ground floor level and self-contained flats above	20122894p

5 Geological sites of special scientific interest and local geological sites

5.1.1 There are no geo-conservation resources identified within the study area.

6 Mining and minerals data

There are no mining or mineral extraction sites within the study area.

7 References

Defra and Environment Agency, (2002), *Potential contaminants for the assessment of land, R&D Publication*, Bristol, Environment Agency.